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| **Directions:** Solve each problem on your paper and place your answer on your whiteboard. |

1. In an isosceles triangle...

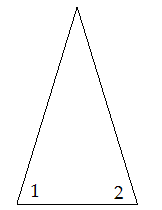
**A.** All the sides are different

**B.** All the sides are the same

**C.** At least two sides are the same

**D.** Exactly two sides are the same

2. In the isosceles triangle shown below, angles 1 & 2 are known as the \_\_\_\_\_\_\_\_ angles.

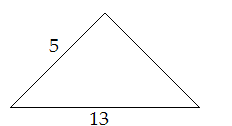


**A.** bottom

**B.** base

**C.** vertical

**D.** alternate

3. a) Re-draw the triangle on your whiteboard with appropriate congruent markings.   
b) Label the base and vertex angles (have them write out the full word)   
c) Identify the missing angle   
How long is the

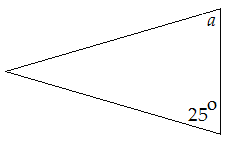
**A.** 5

**B.** 12

**C.** 13

**D.** 18

4. a) Re-draw the triangle on your whiteboard with appropriate congruent markings.   
b) Label the base and vertex angles (have them write out the full word)   
c) Identify the missing angle



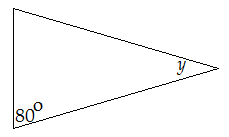
**A.** 

**B.** 

**C.** 

**D.** 

5. a) Re-draw the triangle on your whiteboard with appropriate congruent markings.   
b) Label the base and vertex angles (have them write out the full word)   
c) Identify the missing angle



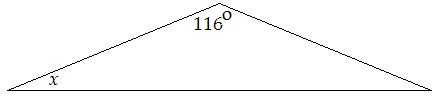
**A.** 

**B.** 

**C.** 

**D.** 

6. a) Re-draw the triangle on your whiteboard with appropriate congruent markings.   
b) Label the base and vertex angles (have them write out the full word)   
c) Identify the missing angle



**A.** 

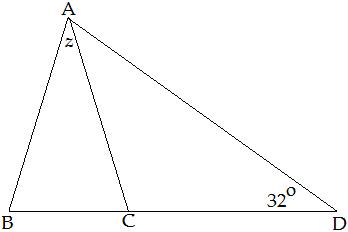
**B.** 

**C.** 

**D.** 

7. Both ABC and ACD are isosceles.

a) Re-draw the triangle on your whiteboard with appropriate congruent markings.   
b) Label the base and vertex angles (have them write out the full word)   
c) Identify the missing angle



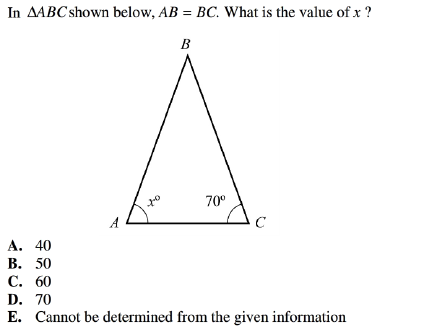
**A.** 

**B.** 

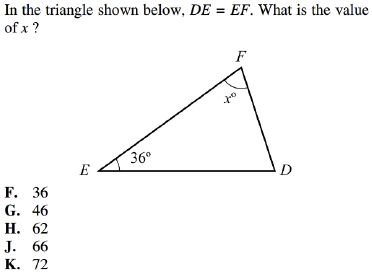
**C.** 

**D.** 

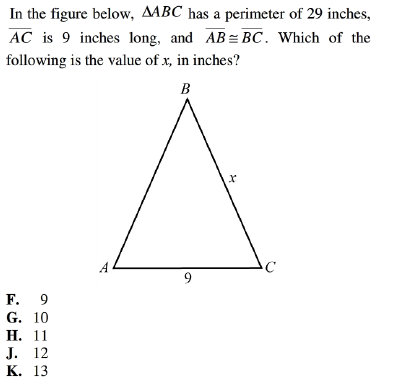
8.



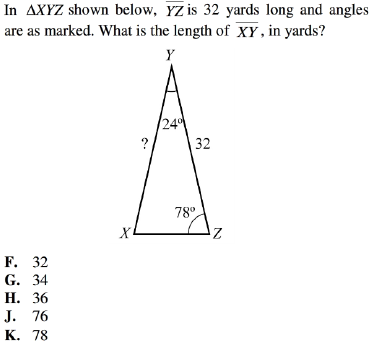
**9.**



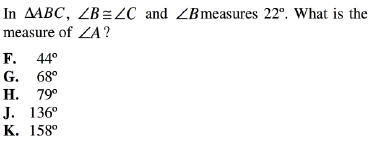
**10.**  a) Re-draw the triangle on your whiteboard with appropriate congruent markings.   
b) Label the base and vertex angles (have them write out the full word)   
c) Identify the missing angle



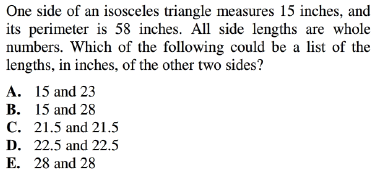
**11.** a) Re-draw the triangle on your whiteboard with appropriate congruent markings.   
b) Label the base and vertex angles (have them write out the full word)   
c) Identify the missing angle



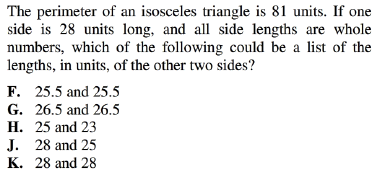
**12.** a) Re-draw the triangle on your whiteboard with appropriate congruent markings.   
b) Label the base and vertex angles (have them write out the full word)   
c) Identify the missing angle



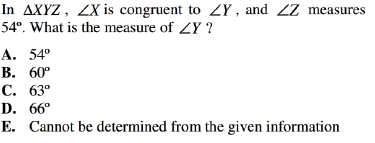
**13.** a) Re-draw the triangle on your whiteboard with appropriate congruent markings.   
b) Label the base and vertex angles (have them write out the full word)   
c) Identify the missing angle



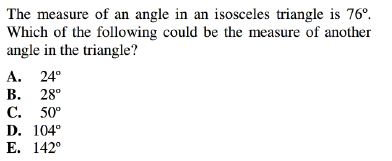
**14.** a) Re-draw the triangle on your whiteboard with appropriate congruent markings.   
b) Label the base and vertex angles (have them write out the full word)   
c) Identify the missing angle



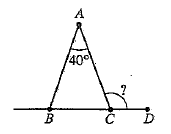
**15.** a) Re-draw the triangle on your whiteboard with appropriate congruent markings.   
b) Label the base and vertex angles (have them write out the full word)   
c) Identify the missing angle

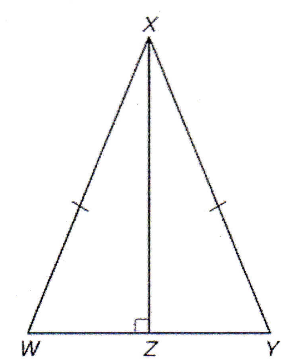


**16.** a) Re-draw the triangle on your whiteboard with appropriate congruent markings.   
b) Label the base and vertex angles (have them write out the full word)   
c) Identify the missing angle

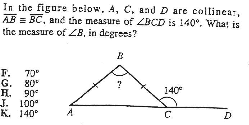
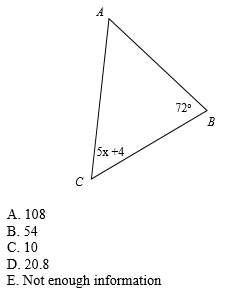


**17.** As shown in the figure below, ΔABC is isosoceles with the length of line segment AB equal to the length of line segment AC. The measure of ∠A is 40° and point B, C, and D are collinear. What is the measure of ∠ACD?



**18.** Given that the triangle below is isosceles, if angle WXY is 44°, what measurement must angle XWY have? 



**19.** **21.** Triangle ABC is isosceles and AB BC. Find the value of *x*. 

**22.** If two isosceles triangles are similar, which of the following must be true?

1. Their base angles are congruent.
2. Their four legs are congruent.
3. Their vertex angles are congruent.
4. I only
5. III only
6. I and II only
7. I and III only
8. I, II, and III

**20.** If the measure of one base angle in an isosceles triangle is 2x and the vertex angle is 40 degrees, what is the value of x and the measure of each base angle?